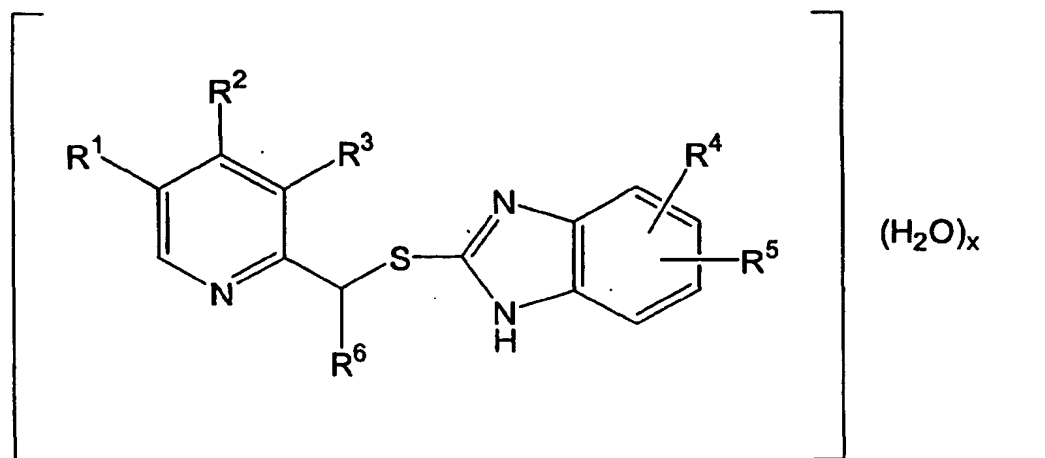


# Claims

1. Crystals of optionally substituted 2-(2-pyridinyl)methylthio-1H-benzimidazole hydrates of the following structural formula I



in which  $R^1$ ,  $R^2$  and  $R^3$ , identical or different, denote  
hydrogen, a C1-C8 alkyl, C3-C8 cycloalkyl, C2-C8  
fluoroalkyl or C1-C8 alkoxy residue,  
 $R^4$  and  $R^5$ , identical or different, denote  
hydrogen, a C1-C8 alkyl, C3-C8 cycloalkyl,  $CH_2$ -  
C3-C8 cycloalkyl, C1-C8 alkoxycarbonyl, C1-C8  
alkoxy, C1-C8 fluoroalkoxy,  $CF_3$ -, C2-C8  
fluoroalkyl or  $C(O)O$ -C1-C8 alkyl residue and  
 $R^6$  denotes  
hydrogen or a C1-C2 alkyl residue and  
x means 0.5-2.

2. Crystals according to claim 1,  
in which  $R^1$ ,  $R^2$  and  $R^3$ , identical or different, denote  
hydrogen, a C1-C3 alkyl or C1-C3 alkoxy residue,  
 $R^4$  and  $R^5$ , identical or different, denote

hydrogen, a C1-C3 alkoxy, C1-C3 fluoroalkoxy  
residue and

R<sup>6</sup> denotes

hydrogen and

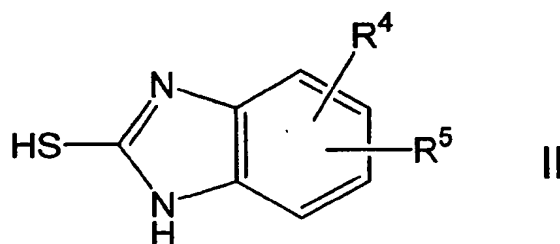
5 x means 0.5-2.

3. Crystals according to claim 1 or 2,  
in which R<sup>1</sup> denotes a methyl group, R<sup>2</sup> a methoxy  
group, R<sup>3</sup> a methyl group, R<sup>4</sup> hydrogen, R<sup>5</sup> a methoxy  
10 group in position 5 and R<sup>6</sup> hydrogen and  
x means 0.5-2.
4. Crystals according to claim 1 or 2,  
in which R<sup>1</sup> denotes hydrogen, R<sup>2</sup> and R<sup>3</sup> in each case  
15 denote a methoxy group, R<sup>4</sup> denotes hydrogen, R<sup>5</sup> a  
difluoromethoxy group in position 5 and R<sup>6</sup> hydrogen  
and x means 0.5-2.
5. A process for the isolation of a compound according to  
20 one of claims 1-4 from a reaction medium containing  
the free base, characterised in that a water-soluble,  
organic solvent present in the reaction medium is at  
most partially removed, water is added to the reaction  
medium at a temperature of below 40°C water in  
25 quantities of at least 55 wt.%, relative to the  
reaction medium, and the hydrates formed are separated  
as crystals and optionally purified in conventional  
manner.
- 30 6. A process according to claim 5, characterised in that  
water is added in quantities of at least 70 wt.%  
relative to the reaction medium.

7. A process according to claim 5, characterised in that water is added in quantities of up to 75 wt.% relative to the reaction medium.

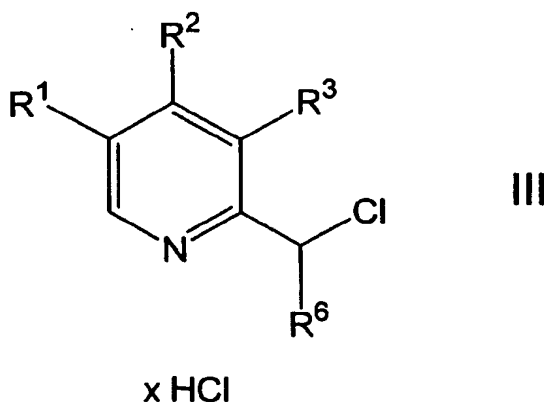
5 8. A process according to one of claims 5-7, characterised in that the water is added at a temperature of 20-25°C.

9. A process according to one of claims 5-8,  
10 characterised in that an unhydrated compound of the formula I was obtained in the reaction medium by reacting a thiol-compound of the formula II



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with a reactive pyridine compound of the formula III



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in presence of at least one base, wherein the residues R<sup>1</sup>-R<sup>6</sup> have the meaning stated in one of claims 1-4.

10. A process according to claim 9, characterised in that sodium and/or potassium hydroxide was used as the base.
- 5 11. A process according to one of claims 5-8, characterised in that the unhydrated compound of the formula I was initially dissolved in a water-miscible, organic solvent.
- 10 12. A process according to one of claims 5-11, characterised in that the water-miscible, organic solvent is an aliphatic alcohol, preferably methanol, ethanol, propanol or butanol, or an aprotic solvent, preferably dimethylformamide, dimethyl sulfoxide, 15 tetrahydrofuran, or a ketone, preferably acetone, or a mixture of at least two these solvents.
13. A process according to one of claims 5-12, characterised in that the crystals are purified by 20 washing with water and/or a solvent/water mixture, preferably an alcohol/water mixture and/or a ketone/water mixture.